



Department of Defense US Army Medical Research and Materiel Command

Fiscal Year 2002 National Prion Research Program Awards List

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Introduction

The US Army Medical Research and Materiel Command is pleased to present the award list of funded projects for the fiscal year 2002 (FY02) National Prion Research Program. Award negotiations were completed by September 30, 2003. The awards listed in this document were selected by a competitive two-tiered review process. Funding decisions were based on scientific excellence evaluated in the first tier of review, followed by programmatic relevance judged in the second tier. These projects represent a diverse portfolio of scientific research directed toward the program's primary goal to support the development of diagnostic tests and means to prevent and manage transmissible spongiform encephalopathies (TSEs).

Congressional direction for FY02 specified \$42.5 million for prion disease research. Following the receipt of funds, a programmatic strategy was developed, proposals were solicited and evaluated, award recommendations were made, and contract negotiations were completed. The FY02 programmatic strategy called for two training award mechanisms and two research awards mechanisms. The goals of the Prion Techniques Fellowship Award are to encourage prion researchers to develop new expertise that would enable them to broaden the scope of their prion research and to attract investigators into the prion research field by allowing them the opportunity to acquire the necessary training. Career Transition Awards were designed to prepare individuals for careers in prion research and assist investigators in overcoming the difficulties inherent in establishing these careers. Idea Awards are intended to support proposals that create or introduce a unique or unusual approach to the study of the prevention, treatment, inactivation, or diagnosis of TSE, especially as they relate to Chronic Wasting Disease. Investigator-Initiated Research Awards support basic and clinically oriented research in TSE that will move the field toward development of an ante mortem diagnostic test for TSE. A total of 38 studies was funded in FY02.

As the funded scientists embark on these projects, the Department of Defense and the US Army gratefully acknowledge the participation of their scientific advisors. The expertise, vision, and diversity of perspectives of all individuals who contributed to this program were vital in developing a sound investment strategy designed to enhance the development of diagnostic tests and means to prevent and manage TSEs.

Career Transition Awards

Log Number	Last Name	First Name	Institution	ProposalTitle	Award Amount
NP020041	Bartz	Jason	Creighton University	Prion Transport to Secondary Lymphoreticular System Tissues	\$443,176
NP020064	Stewart	Richard	Washington University	The Role of a Novel Topological Form of the Prion Protein in Prion Disease	\$445,800
NP020081	Sigurdson	Christina	University Hospital of Zürich	Investigation of Immunization Strategies against Chronic Wasting Disease in Deer and Elk	\$555,000
NP020147	Kumar	Rajeev	Cold Spring Harbor Laboratory	A Combinatorial Approach of Gene Silencing and Expression Profiling in Deciphering the Roles of Prion and Auxiliary Molecules in Aberrant Prion Replication	\$121,800

Idea Awards

Log Number	Last Name	First Name	Institution	Proposal Title	Award Amount
NP020061	Harris	David	Washington University	Propagation of Mammalian Prions in Yeast	\$575,500
NP020063	Clinkenbeard	Kenneth	Oklahoma State University	Development of Aptamer Beacons for Antemortem Diagnosis of Chronic Wasting Disease	\$569,250
NP020078	Rohwer	Robert	Baltimore Research and Education Foundation, Inc.	Efficient and Rapid Development of Transgenic Hamster Models of TSEs Using a Radical New Technology	\$402,565
NP020079	Rohwer	Robert	Baltimore Research and Education Foundation, Inc.	Physical Characterization of a Highly Infectious Monodisperse Preparation of TSE Infectivity as a Substrate for Diagnostic Development	\$401,939
NP020085	Young	Alan	South Dakota State University	Migratory Leukocytes in the Pathogenesis and Diagnosis of Prion Disease	\$264,031
NP020088	Chiang	Peter	Walter Reed Army Institute of Research	Combination Therapy for Prion Diseases Using Synthetic Analogs and Natural Products of Acridine and Polyamines	\$447,141
NP020090	Aiken	Judd	University of Wisconsin	Diagnosing Prion Diseases: A Genomic and Proteomic Approach to Biomarker Discovery	\$541,815
NP020098	McGuirl	Michele	University of Montana	Elucidation of Prion Protein Conformational Changes Associated with Infectivity by Fluorescence Spectroscopy	\$501,840
NP020116	Petrich	Jacob	Iowa State University	Development of Methods for the Real-Time and Rapid Identification and Detection of TSE in Living Animals Using Fluorescence Spectroscopy of the Eye	\$549,021
NP020117	Wemmer	David	University of California, Berkeley	New Structural Approaches to Understand the Disease-Related Forms of the Prion Protein	\$563,688
NP020118	Zhao	Qi	University of Dundee	Development of Anti-Prion Surgical Instruments and Highly Sensitive Prion Diagnostic Probes by Ion Implantation Technique	\$247,807
NP020120	Constantine	Niel	University of Maryland, Baltimore	Ultra-Sensitive Detection of Prion Protein in Blood Using Isothermal Amplification Technology	\$415,600
NP020123	Sreevatsan	Srinand	The Ohio State University Research Foundation	Development of High Affinity Ligands and Methods to Detect Prions	\$377,598
Log Number	Last Name	First Name	Institution	Proposal Title	Award Amount
NP020132	Cox	Daniel	University of California, Davis	Theoretical Modeling of Molecular Mechanisms, Time Scales, and Strains in Prion Diseases	\$516,831
NP020160	Li	Liming	Northwestern University	Establishing C. Elegans as a Model Organism for Prion Research	\$399,817
NP020163	Taraboulos	Albert	Hebrew University of Jerusalem	Development of a Rapid and Sensitive Test for the Detection of Prions in Cultured Cells	\$454,320

NP020184	Kennedy	Brian	University of Washington	Structural Inheritance in Yeast	\$560,324
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Investigator-Initiated Research Awards

Log Number	Last Name	First Name	Institution	Proposal Title	Award Amount
NP020028	Manuelidis	Laura	Yale University School of Medicine	Alternative Molecular and Cellular Approaches to the Diagnosis, Transmission, and Prevention of Creutzfeldt-Jakob Disease	\$1,361,445
NP020030	Sy	Man Sun	Case Western Reserve University	Development of Rapid, Simple, and Sensitive Capture-ELISA for the Diagnosis of TSE	\$2,494,370
NP020038	Prusiner	Stanley	University of California, San Francisco	Ante-Mortem Prion Diagnostics	\$2,399,439
NP020044	Carlson	George	McLaughlin Research Institute for Biomedical Sciences	Early Host Responses to Prion Infection: Development of in Vivo and in Vitro Assays	\$2,241,625
NP020048	Rubenstein	Richard	New York State Institute for Basic Research	Experimental and Theoretical Approaches to PrPSc Detection in Biological Fluids and Antemortem Diagnosis of TSE Based on Laser-Induced Fluorescence Immunoassays	\$1,549,998
NP020069	Chen	Shu	Case Western Reserve University	Development of Assay for Prion-Specific Detection and Antemortem Diagnosis	\$1,006,885
NP020087	Aiken	Judd	University of Wisconsin	Environmental Impact of Chronic Wasting Disease	\$2,377,595
NP020089	Schubert	David	The Salk Institute for Biological Studies	The Antemortem Detection and Conformational Switches of Prion Proteins	\$999,588
NP020094	McKenzie	Debbie	University of Wisconsin	Genetic Susceptibility and Biological Characterization of Chronic Wasting Disease	\$2,281,436
NP020105	Lindquist	Susan	Whitehead Institute for Biomedical Research	Deconstructing Prion Biogenesis, Elimination, and Neurotoxicity	\$2,408,508
NP020111	De Yoreo	James	Lawrence Livermore National Laboratory	Preclinical Detection of PrP-Scrapie in Blood	\$1,155,000
NP020114	Caughey	Byron	National Institutes of Health	High-Throughput Screening of Compounds for Anti-Transmissible Spongiform Encephalopathy Activity Using Cell-Culture and Cell-Free Models and Infected Animals	\$993,700
NP020119	Williamson	Robert	Scripps Research Institute	PrPSc-Specific Reagents for the Diagnosis and Therapy of Prion Infection	\$1,500,000
NP020121	Aguzzi	Adriano	University Hospital - Zürich	Diagnostic, Prognostic, and Therapeutically Relevant Prion Co-Factors: An Approach Based on Functional Genomics	\$1,508,719
NP020152	Williams	Elizabeth	University of Wyoming	Epidemiology of Chronic Wasting Disease: PrPres Detection, Shedding, and Environmental Contamination	\$2,000,852
NP020178	Rohwer	Robert	Baltimore Research and Education Foundation, Inc.	Development of an Assay for the Detection of PrPres in Blood and Urine Based on PMCA Assay and ELISA Methods	\$1,492,444

Prion Techniques Fellowship Award

Log Number	Last Name	First Name	Institution	Proposal Title	Award Amount
NP020059	Felts	Paul	University of London	Integument: Prion Fate and Diagnostic Potential	\$35,743

Fiscal Year 2002 National Prion Research Program Peer Reviewers

Peer Reviewers	Degree	Institution/Affiliation
Asher, David	M.D.	Nicholson Lane Research Center
Bartz, Jason	Ph.D.	Creighton University
Bastian, Frank	M.D.	Tulane Health Science Center
Belay, Ermias	M.D.	Centers for Disease Control and Prevention
Beutler, Bruce	M.D.	The Scripps Research Institute
Bollinger, Trent	D.V.M., D.V.Sc.	University of Saskatchewan
Bolton, David	Ph.D.	New York State Institute for Basic Research
Borchelt, David	Ph.D.	Johns Hopkins Medical Institute
Bowers, Michael	Ph.D.	University of California
Brandon, David	Ph.D.	USDA Agricultural Research Service
Brown, David	D.V.M., Ph.D.	Tufts University
Cai, Kang	Ph.D.	Bayer Biological Products
Carlson, George	Ph.D.	McLaughlin Research Institute
Carp, Richard	V.M.D., Ph.D.	New York State Institute for Basic Research
Caspar, Donald L. D.	Ph.D.	Florida State University
Castellani, Rudolph	M.D.	Michigan State University
Chang, Rowen	Ph.D.	University of Texas, Houston
Chen, Shu	Ph.D.	Case Western Reserve University
Chernoff, Yury	Ph.D.	Georgia Institute of Technology
Drisko, Jeanne	M.D.	University of Kansas Medical Center
Germain, Marc	M.D., Ph.D.	Hema-Quebec
Govaerts, Cedric	Ph.D.	University of California, San Francisco
Gregori, Luisa	Ph.D.	VA Medical Center
Grossman, Abraham	Ph.D.	Science and Technology, Q-RNA
Harris, David	M.D., Ph.D.	Washington University School of Medicine
Keefer, Garrett	Ph.D.	Executive Secretary
Ketchel, Melvin	Ph.D.	Executive Secretary
Knox, Konstance	Ph.D.	Wisconsin Viral Research Group
LeBlanc, Andrea	Ph.D.	Jewish General Hospital
Legname, Giuseppe	Ph.D.	University of California
Liebman, Susan	Ph. D.	University of Illinois

Peer Reviewers	Degree	Institution/Affiliation
Lockshon, Daniel	Ph.D.	University of Washington
MacPhee, Martin	Ph.D.	Clearant, Inc.
Manak, Mark	Ph.D.	BBi Biotech Research Labs
Masison, Daniel	Ph.D.	National Institutes of Health
Mastrianni, James	M.D., Ph.D.	University of Chicago
Millhauser, Glenn	Ph.D.	University of California, Santa Cruz
Nath, Avindra	M.D.	Johns Hopkins University
Novakofski, Jan	Ph.D.	University of Illinois
Orser, Cindy	Ph.D.	Arete Associates
Otvos Jr., Laszlo	Ph.D., D.Sc., CBA	The Wistar Institute
Riek, Roland	Ph.D.	The Salk Institute
Rubenstein, Richard	Ph. D.	New York State Institute for Basic Research
Scallet, Andrew	Ph.D.	National Center for Toxicological Research
Sihag, Ram	Ph.D.	National Institutes of Health
Singh, Neena	M.D., Ph.D.	Case Western Reserve University
Skinner, Pam	Ph.D.	University of Minnesota
Sreevatsan, Srinand	D.V.M., M.P.H., Ph.D.	Ohio State University
Srikrishnan, Thamarapu	Ph.D.	Roswell Park Cancer Institute
Stenland, Chris	Ph.D.	Bayer Biological Products
Supattapone, Surachai	M.D., Ph.D.	Dartmouth College
Telling, Glenn	Ph.D.	University of Kentucky
Tsirka, Styliani-Anna	Ph.D.	State University of New York at Stony Brook
Umland, Timothy	Ph.D.	Hauptman-Woodward Institute
Wemmer, David	Ph.D.	University of California
Wisniewski, Thomas	M.D.	New York University School of Medicine
Wong, Paul K. Y.	Ph.D.	University of Texas M.D. Anderson Cancer Center
Zebovitz, Eugene	Ph.D.	Executive Secretary

**Fiscal Year 2002 National Prion Research Program
Integration Panel (IP) Members**

IP Members	Degree	Institution/Affiliation
Cirone, Salvatore	D.V.M., M.P.V.M.	Office of the Assistant Secretary of Defense for Health Affairs
Cuccherini, Brenda	Ph.D., M.P.H.	Department of Veterans Affairs
Detwiler, Linda	D.V.M.	U.S. Department of Agriculture
Dodd, Roger	Ph.D.	American Red Cross
Fitzpatrick, COL Glen	Ph.D.	Office of the Surgeon General Armed Services Blood Program Office
Nemo, George	Ph.D.	National Heart, Lung, and Blood Institute
Nightingale, Stephen	M.D.	U.S. Department of Health and Human Services
Oesch, Bruno	Ph.D.	Prionics, Inc.
Pitman, Mark	Ph.D.	Medical Research Council
Priolo, Suzette	Ph.D.	National Institute of Allergy and Infectious Diseases
Rogalski-Salter, Taryn	Ph.D.	GlaxoSmithKline and PhRMA
Schonberger, Lawrence	M.D., M.P.H.	Centers for Disease Control and Prevention
Scott, Dorothy	M.D.	Food and Drug Administration
Severin, COL Scott	D.V.M.	Department of Defense Veterinary Services Activity
Will, Robert	M.D.	Western General Hospital

Glossary of Terms

Career Transition Award: The overall goal of Transition Awards is to prepare individuals for careers in prion research and assist investigators in overcoming the difficulties inherent in the field. Career Transition Awards (Transition Awards) are designed to support the last 2 years of a postdoctoral fellowship and up to 3 years of a junior faculty position to encourage the recipient to pursue a prion-related research career. These awards are intended to facilitate career advancements by accommodating the relatively long time that it takes to generate data in prion experimental models. Such awards will provide investigators who are committed to prion research the opportunity to acquire the data and experience to move into their first faculty position and compete for traditional awards later in their careers.

Prion Techniques Fellowship Award: Prion Techniques Fellowship Awards (PTFs) are designed to offer investigators the opportunity to work in the laboratory of an established prion researcher to acquire critical skills or learn new methods relevant to prion research. The goals of the PTF are to encourage prion researchers to develop new expertise or receive training that would enable them to broaden the scope of their prion research and to attract investigators into prion research by allowing them the opportunity to acquire the necessary skills/training. For the purpose of this program, a PTF is intended for an individual who (1) is a postdoctoral trainee, medical resident, or clinical fellow; or (2) has his or her own independent program of prion research; or (3) has his or her own established independent research program with limited or no experience in the prion field.

Idea Award: The intent of Idea Awards is to encourage innovative approaches to studying **transmissible spongiform encephalopathies (TSEs)**. This award mechanism is designed to encourage innovative approaches to TSE research from both established TSE investigators and established investigators in other fields who want to move into TSE-related research. Idea Award proposals should create or introduce a unique or unusual approach to the study of the prevention, treatment, inactivation, or diagnosis of TSEs, especially as they relate to Chronic Wasting Disease. Although Idea Award proposals do not require preliminary or pilot data, they should be based on a sound scientific rationale established through a critical review and analysis of the literature and/or logical reasoning. Although this research is inherently risky in nature, the research plan must demonstrate solid scientific judgment and rationale. Preliminary or pilot data are not required for this award mechanism.

Investigator-Initiated Research Award: The intent of Investigator-Initiated Research Awards (IIRAs) is to sponsor basic and clinically oriented research in TSEs. These awards are intended to fund independent investigators across a broad spectrum of disciplines. The development of partnerships that will leverage diverse resources and expertise toward the development of an ante mortem diagnostic test for TSEs is strongly encouraged. All IIRA proposals must include preliminary data relevant to TSE research and the proposed project. Proposals with military relevance are specifically sought. Nested Postdoctoral Traineeships are being offered as an optional part of IIRA proposals. The intent of the Nested Postdoctoral Traineeships is to enable doctoral degree graduates to either extend ongoing research related to TSEs or broaden the scope of their research to include work relevant to TSEs under the guidance of a designated mentor who is participating in the proposal. It is expected that the training will provide a valuable opportunity to further develop the experience necessary to advance the trainee's research career in TSEs.